

- (c) providing, on only one of said sheet layers, a veneer layer to form a layered structure consisting essentially of said substrate layer, said sheet layers and said veneer layer;
- (d) providing the layered structure of step (c) in a pressing apparatus; and
- (e) subjecting the layered structure of step (d) to elevated temperature and pressure in said pressing apparatus for a period sufficient to cure said resin at said temperature and pressure.

53. (Amended) A laminated composite wood product made by a method comprising the steps of:

- (a) providing a rigid substrate layer having two substantially flat sides;
- (b) providing, on each of said sides of the substrate layer, an alpha cellulose sheet layer that is substantially saturated with a thermosetting melamine resin;
- (c) providing, on at least one of said sheet layers, a veneer layer to form a layered structure consisting essentially of said substrate layer, said sheet layers and said veneer layer;
- (d) providing the layered structure of step (c) in a pressing apparatus; and
- (e) subjecting the layered structure of step (d) to elevated temperature and pressure in said pressing apparatus for a period sufficient to cure said resin at said temperature and pressure, said pressing apparatus comprising a first platen and a second platen, said first platen operating at a temperature different from an operating temperature of said second platen.

REMARKS

In the final Office Action of May 17, 2002, claims 14, 17, 24, 25, 26-29, 36-41, 48, 49 and 51-54 were rejected under 35 U.S.C. 103(a) as obvious over Baymiller (U.S. Patent No. 3,816,236) in view of McClain (U.S. Patent No. 1,299,747). This ground of rejection is respectfully traversed.

The Examiner states that Baymiller teaches a veneered or laminated board structure having a crossbanding material sandwiched between a wood core and a wood veneer. According to the reference, the crossbanding material is made from a porous felt sheet containing a urea-formaldehyde resin. The reference states that the felt material is a porous material in sheet form, and is composed of rag and asplund wood fibers. See col. 1, lines 64-48 of the reference.

The Examiner maintains that kraft paper, manufactured by the International Paper Company, can be substituted for the rag material of Baymiller. Support for this proposition is said to be derived from the reference. However, with respect to the kraft paper made by International Paper, the reference states that the vendor "experienced trouble in its use" and that the curing of such paper "creates problems in manufacture and storage". See col. 1, lines 30-37 of the reference. Accordingly, and contrary to the Examiner's statement, the reference actually teaches one skilled in the art away from the use of kraft paper as a crossbanding material.

Finally, as recognized by the Examiner, there is no teaching in the reference that a saturated resin sheet should be applied to the non-veneer surface of the substrate, and the McClain reference has been cited in an attempt to overcome this deficiency. However, the McClain reference only teaches the use of the phenolic resin impregnated fibrous material as a protective surface layer. This is distinguished from the present invention wherein purpose of using the resin saturated kraft paper on the side of the panel opposite the veneer face is to reduce warpage of the product. Accordingly, one skilled in the art would not look to the McClain reference or guidance when the issue confronting such an individual is one skilled in the art is warpage of the product rather than durability of the surface finish.

Claims 22, 23, 34 35 and 47 have been rejected under 35 U.S.C. 103(a) as obvious over Baymiller in view of McClain, as applied above, and further in view of Guyette (U.S. Patent No. 5,425,986). This ground of rejection is also traversed.

Both the Baymiller and McClain references have been discussed above. Applicant submits that these references would not apply to claims 23, 35 and 47 for the reasons discussed above in connection with the previous rejection.

The Guyette reference has been cited for its disclosure that the kraft paper should comprise a kraft paper having a weight of 25 to 400 grams, and that the paper can be impregnated with 5% to about 75% by weight of resin. Applicant's position is that the Guyette reference fails to cure the deficiencies of either the Baymiller or McClain references as noted above, and specifically that neither of these references teaches or suggests the use of kraft paper in the Baymiller product. Therefore, Guyette would not render obvious the invention encompassed by these claims obvious.

Claims 22, 34 and 46 stand rejected under 35 U.S.C. 103(a) as obvious over Baymiller in view of McClain, and further in view of Brooker et al. (U.S. Patent No. 5,723,221). This rejection is traversed.

The Brooker et al. reference is relied upon as teaching that melamine and urea formaldehyde resins are interchangeable for saturating paper sheets in high or low pressure processes. However, there is no indication from the reference that a melamine resin would be suitable in the Baymiller product. Moreover, Brooker et al. would still fail to teach or suggest the use of kraft paper in Baymiller, in view of the teaching away from kraft paper in the reference as discussed above.

Claims 14, 17, 24, 25, 26-29, 36-41, 49 and 51-54 have been rejected under 35 U.S.C. 103(a) over Molloy et al. (U.S. Patent No. 3,916,059) in view of Baymiller. This ground of rejection is traversed.

The Examiner contends that the Molloy et al. reference describes a laminated structure comprising a crossbanding material sandwiched between a wood core and a veneer. The Examiner further states that the back sheet of the Molloy et al. laminate may comprise a crossbanding sheet. The Examiner acknowledges that Molloy et al. does not describe the use of a resin saturated kraft paper as a crossbanding material, but contends that this is taught by the Baymiller reference.

As stated in the Office Action, the Molloy et al. reference describes the use of the crossbanding sheet as the surface sheet in place of the veneer. However, the reference states that this is accomplished in order to obtain a decorative outer surface. See col. 3, lines 3-8. In contrast, and as noted previously, the purpose of providing the resin saturated kraft paper on the side opposite the veneer in the present invention is to prevent warpage of the laminated structure. Applicant submits that Molloy et al., like the McClain reference, provides no guidance to one skilled in the art with respect to warpage, and such an individual would therefore not be motivated to combine the references as suggested by the Examiner.

Claims 22, 23, 34, 35, 46 and 47 have been rejected under 35 U.S.C. 103(a) as obvious over Molloy et al., in view of Baymiller, and further in view of Guyette. This ground of rejection is traversed.

The Molloy et al., Baymiller and Guyette references have all been discussed above. The Guyette reference fails to cure the deficiencies of either the Baymiller or McClain references as noted above, and specifically that neither of these references teaches or suggests the use of kraft paper in the Baymiller product. Therefore, Guyette would not render obvious the invention encompassed by these claims.

Claims 18-21, 30-33 and 42-45 have been rejected under 35 U.S.C. 103(a) as obvious over Molloy et al. in view of Baymiller, and further in view of Brooker et al. This ground of rejection is traversed.

All of these references have been discussed previously in this Amendment. Even assuming this combination of references is proper, the Brooker et al. reference fails to teach or suggest the use of kraft paper in the Baymiller reference, in view of the express teaching in Baymiller that saturated kraft paper is not appropriate for the reasons discussed previously.

In view of the foregoing facts and reasons, this application is now believed to overcome all remaining rejections, and to otherwise be in proper condition for allowance. Entry of this Amendment is appropriate at this time since it serves only to restrict the claims, and does not require any additional search or consideration on the part of the Examiner. Accordingly, withdrawal of the outstanding rejections, and favorable action on this application, is solicited. The Examiner is invited to contact the undersigned at the telephone number listed below if this is believed to facilitate allowance of this application.

Respectfully submitted,

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MARKED-UP CLAIM

14. (Twice Amended) A laminated composite wood product made by a method comprising the steps of:

- (a) forming a layered structure comprising a rigid substrate layer having two substantially flat sides, a resin-saturated alpha cellulose sheet layer disposed on each of said sides, and a veneer layer disposed on only one of said sheet layers, and
- (b) subjecting said structure to elevated temperature and pressure in a pressing apparatus for a time sufficient to cure said resin at said temperature and pressure.

17. (Twice Amended) A laminated composite wood product comprising a rigid substrate layer having two substantially flat sides, a resin-saturated alpha cellulose sheet layer on each of said substantially flat sides, and a veneer layer on only one of said sheet layers.

37. (Twice Amended) An unwarped laminated composite wood product made by a method comprising the steps of:

- (a) forming a layered structure comprising a rigid substrate layer having two substantially flat sides, a resin-saturated alpha cellulose sheet layer disposed on each of said sides, and a veneer layer disposed on only one of said sheet layers; and
- (b) subjecting said structure to elevated temperature and pressure in a pressing apparatus for a time sufficient to cure said resin at said temperature and pressure, said pressing apparatus comprising a first platen and a second platen, said first platen operating at a temperature different from an operating temperature of said second platen, to provide an unwarped, laminated composite wood product.

51. (Amended) A laminated composite wood product made by a method comprising the steps of:

- (a) providing a rigid substrate layer having two substantially flat sides;

- (b) providing, on each of said sides of the substrate layer, [a] an alpha cellulose sheet layer that is substantially saturated with a thermosetting melamine resin;
- (c) providing, on only one of said sheet layers, a veneer layer to form a layered structure consisting essentially of said substrate layer, said sheet layers and said veneer layer;
- (d) providing the layered structure of step (c) in a pressing apparatus; and
- (e) subjecting the layered structure of step (d) to elevated temperature and pressure in said pressing apparatus for a period sufficient to cure said resin at said temperature and pressure.

53. (Amended) A laminated composite wood product made by a method comprising the steps of:

- (a) providing a rigid substrate layer having two substantially flat sides;
- (b) providing, on each of said sides of the substrate layer, [a] an alpha cellulose sheet layer that is substantially saturated with a thermosetting melamine resin;
- (c) providing, on at least one of said sheet layers, a veneer layer to form a layered structure consisting essentially of said substrate layer, said sheet layers and said veneer layer;
- (d) providing the layered structure of step (c) in a pressing apparatus; and
- (e) subjecting the layered structure of step (d) to elevated temperature and pressure in said pressing apparatus for a period sufficient to cure said resin at said temperature and pressure, said pressing apparatus comprising a first platen and a second platen, said first platen operating at a temperature different from an operating temperature of said second platen.